

REMARKS:Status

Claims 1 to 24 and 26 to 29 are pending. Claims 1, 5, 6, 11, 12, 17, 18, 23, and 24 are the independent claims and have been amended. Reconsideration and further examination are respectfully requested.

Provisional Double Patenting Rejection

Claims 1, 5, 6, 11, 12, 17, 18, 23, and 24 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1 and 2 of copending Application No. 10/829,718. In response, Applicants' representative is filing herewith a Terminal Disclaimer over Application No. 10/829,718, which is commonly owned with this application. Accordingly, withdrawal of the double patenting rejection is respectfully requested.

Section 103 Rejection

All pending claims were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,779,182 (Zolnowsky).

Amended independent claim 1 is reproduced below:

1. A computer implemented method including scheduling tasks from a set thereof for running on a plurality of processors, each processor having access to a shared resource, wherein each task of the set of tasks is associated with one of a plurality of scheduling domains, at least one scheduling domain being associated with at least two tasks of the set of tasks, and wherein tasks within each scheduling domain can

be run on different processors but are prohibited from running concurrently even if run on different processors; and
allowing a plurality of tasks of the set of tasks to run concurrently in different scheduling domains.

Zolnowsky does not disclose or suggest the foregoing features of claim 1, at least with respect to the feature that “tasks within each scheduling domain can be run on different processors but are prohibited from running concurrently even if run on different processors.”

In this regard, the Office Action stated that “Zolnowsky suggests that threads in the same run queue are not running concurrently on the *same* processor.” Office Action, part 7, ¶ 4 (emphasis added). However, this is not what was meant by the claim language. When read as a whole and in light of the specification, Applicants’ claim language is directed toward prohibiting tasks within each scheduling domain that are running on *different* processors from running concurrently. Applicants have amended claim 1 to emphasize this meaning.

Zolnowsky discloses “separate dispatcher queues 401, 402, ..., 403 for processors 1, 2, ..., N and in addition a global high priority real time queue 404.” Col. 6, lines 36 to 38. These queues hold threads, and a processor can “steal” a thread from another processor’s queue. See col. 7, lines 12 to 16. “[A] thread can be selected for execution by a processor from any one of the high priority queue, its own dispatch queue, and other processors’ dispatch queues.” Col. 8, lines 52 to 55.

This language clearly implies that threads from a dispatcher queue can be run concurrently on different processors. For example, if a thread from queue 401 is being run on

processor 1, and processor 2 “steals” another thread from that queue, then those two threads will be running concurrently on processors 1 and 2.

Likewise, if two high priority threads are on global high priority real time queue 404, two available processors could take those two threads successively, which could then be running concurrently. Even though Zolnowsky does not explicitly state that such threads would be running concurrently, this is at least implied because doing so would “provide the fastest possible service to real time threads.” See col. 8, lines 24 to 28.

In any event, Zolnowsky certainly does not teach a prohibition on concurrently running threads from a queue on different processors. Thus, Zolnowsky’s queues clearly are not equivalent to claim 1’s scheduling domains within which “tasks ... can be run on different processors but are prohibited from running concurrently even if run on different processors.”

The other independent claims now recite scheduling domains or schedulers for such domains that substantially embody the features discussed above.

In view of the foregoing, the independent claims and their dependent claims are believed to be allowable over Zolnowsky. Such action is respectfully requested.

No Admission

Applicant’s decision not to argue each of the dependent claims separately is not an admission that the subject matter of those claims is taught by the applied art.

Closing

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at (614) 205-3241. All correspondence should continue to be directed to the address indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dane C. Butzer". The signature is fluid and cursive, with the first name "Dane" being the most prominent.

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Dated: October 28, 2005

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